

WHAT IS CLAIMED IS:

1. A portable data storage device, which is equipped with a memory, comprising:

a hard disk unit for mounting a robust hard disk of a very small size and a large capacity and controlling the same;

a display unit for notifying a user of a state of the device;

an interface unit for interfacing an external device and receiving a power from outside;

a control unit for controlling each of the units; and

a memory unit equipped with a ROM or RAM for providing a memory required for the control unit.

2. The device of claim 1, wherein the hard disk unit includes:

a very small-sized hard disk which has a size of about 1 square inch, a storage capacity of 1 to 100GB, a very low power consumption and robustness;

a hard disk controller controlling the operation of the hard disk under control of the control unit; and

a hard disk connecting unit enabling the connection and linking between the hard disk controller and the very small-sized hard disk.

3. The device of claim 1, wherein the interface unit is any one of a

USB interface, parallel interface, serial interface, PCMCIA interface and IEEE 1394 interface.

4. The method of claim 3, wherein, when connected to a windows system of a personal computer with the interface equipped, the interface is automatically recognized as a virtual drive without turning on and off the power.

5. The device of claim 2, wherein the hard disk controller has inside a hard disk controller IC, the hard controller IC supporting the ATA/ATAPI mode or compact flash type.

6. The device of claim 1, wherein the portable data storage device is of a size capable of being held by the hand and put into a pocket of a Y-shirt when carried.

7. The device of claim 2, wherein the very small-sized hard disk includes:

a hard disk plate and a hard disk arm;

a hard disk dedicated controller for directly controlling the hard disk arm and the hard disk plate; and

a hard disk connector for connecting the hard disk and the hard disk controller,

wherein the hard disk connector is a connector with 20 pins.

8. The device of claim 3, wherein, when the device is equipped with the USB or IEEE 1394 interface and a personal computer is booted in the USB or IEEE 1394 interface, the computing environment of the user is implemented as its.